DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SPECTACLE POND	Lake Area (ha):	43.54
Town: ENFIELD	Maximum depth (m):	5.5
County: Grafton	Mean depth (m):	3.0
River Basin: Connecticut	Volume (m³):	1313500
Latitude: 43°36'05" N	Relative depth:	0.7
Longitude: 72°01'58" W	Shore configuration:	1.80
Elevation (ft): 1183	Areal water load (m/yr): 4.36
Shore length (m): 4200	Flushing rate (yr^{-1}) :	1.40
Watershed area (ha): 327.1	P retention coeff.:	0.68
<pre>% watershed ponded: 0.0</pre>	Lake type:	natural

BIOLOGICAL:	15 February 1996	18 July 1995
DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBRYON 50%	CHRYSOSPHAERELLA 50%
#2	ASTERIONELLA 40%	CERATIUM 20%
#3		DINOBRYON 15%
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		4.03
DOM. ZOOPLANKTON (% TOTAL) #1	POLYARTHRA 34%	KERATELLA 39%
#2	CILIATE SPP. 31%	NAUPLIUS LARVA 36%
#3		CYCLOPOID COPEPOD 9%
ROTIFERS/LITER	36	159
MICROCRUSTACEA/LITER	21	152
ZOOPLANKTON ABUNDANCE (#/L)	83	326
VASCULAR PLANT ABUNDANCE		Common
SECCHI DISK TRANSPARENCY (m)		4.5
BOTTOM DISSOLVED OXYGEN (mg/L)	6.4	7.4
BACTERIA (E. coli, #/100 ml) #1		8
#2		54
#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None Hypolimnion volume (m³): None Anoxic volume (m³): None

CHEMICAL:			SPECTACLI ENFIELD	E POND	
	15 Febru	uary 1996	18 3	July 1995	
DEPTH (m)	1.0	2.5	1.5		3.0
pH (units)	6.2	6.3	7.0		7.0
A.N.C. (Alkalinity)	6.2	7.0	6.9		6.8
NITRATE NITROGEN	0.08	0.08	0.07		0.05
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.19		0.30
TOTAL PHOSPHORUS	0.010	0.009	0.014		0.016
CONDUCTIVITY (µmhos/cm)	40.7	40.2	36.1		35.4
APPARENT COLOR (cpu)	39	37	15		17
MAGNESIUM			0.67		
CALCIUM			3.6		
SODIUM			2.1		
POTASSIUM			< 0.40		
CHLORIDE	2	2	2		2
SULFATE			5		5
TN : TP	38	42	19		22
CALCITE SATURATION INDEX			2.9		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1995

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
0	2	3	1	6	Oligo.

COMMENTS:

- 1. This pond was previously surveyed and classified in 1982. It was oligotrophic in both years, but the macrophyte growth appeared more abundant in 1995.
- 2. Boat speed on the pond is limited to 10 mph.
- 3. Pond bottom appeared to be very rocky.

FIELD DATA SHEET

LAKE: SPECTACLE POND

DATE: 07/18/95

TOWN: ENFIELD

WEATHER: OVERCAST, HAZY & FOGGY

DEPTH	TEMP	*DISSOLVED	OXYGEN
(M)	(°C)	OXYGEN	SATURATION
0.1	22.5	7.8	88 %
1.0	22.5	7.7	87 %
2.0	22.5	7.7	87 %
3.0	22.5	7.7	87 %
4.0	22.2	7.5	85 %
4.5	22.0	7.4	84 %
		41444	
	140		

SECCHI DISK (m): 4.5 COMMENTS:

BOTTOM DEPTH (m): 5.5

TIME: 1245

*Dissolved oxygen values are in mg/L

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AQUATIC PLANT SURVEY

ll	LAKE:	SPECTACLE	POND	TOWN:	ENFIELD	DATE:	07/18/95

Key	PI	ABUNDANCE	
ией	GENERIC	COMMON	ABUNDANCE
Н	Equisetum	Horsetail	Scattered
P	Pontederia cordata	Pickerelweed	Scat/Common
d	Dulichium arundinaceum	Three-way sedge	. Sparse
N	Nymphaea	White water lily	Scat/Common
Y	Nuphar	Yellow water lily	Scattered
R	Phragmites communis	Reed grass	Sparse
W	Potamogeton	Pondweed	Scattered
E	Eriocaulon septangulare	Pipewort	Scat/Common
J	Juncus	Rush	Sparse
F	Nymphoides cordatum	Floating heart	Sparse
L	Lobelia dortmanna	Water lobelia	Scattered
S	Sparganium	Bur reed	Scattered
е	Eleocharis	Spike rush	Sparse
В	Brasenia schreberi	Water shield	Sparse

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

- 1. Plants were densest in the outlet arm of the pond. Some bladderwort was noted along the bottom near the outlet, and non-flowering thread-like growth was abundant in this area.
- 2. Chara came up on the anchor; it may be along the bottom but is not noted on the map.
- 3. One loon was observed.